

TP-00035(2)

TP-00035(2)

NOAA FORM 76-35

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

## DESCRIPTIVE REPORT

Type of Survey ..... CHART TOPOGRAPHY  
Job No. .... CM-7408 ..... Map No. .... TP-00035(2)  
Classification No. .... Final ..... Edition No. .... Second

### LOCALITY

State ..... WASHINGTON  
Snake River, Lower Granite  
General Locality ..... Dam and Reservoir  
Locality ..... Lower Granite Dam

19 74 TO 1977

### REGISTRY IN ARCHIVES

DATE .....



## DESCRIPTIVE REPORT - DATA RECORD

## TYPE OF SURVEY

- ☐ ORIGINAL  
☐ RESURVEY  
☒ REVISED (partial)

SURVEY TP-00035(2)

MAP EDITION NO. (2)

MAP CLASS Final

JOB PH- CM-7408

## PHOTOGRAMMETRIC OFFICE

Coastal Mapping Division, Norfolk, VA

## OFFICER-IN-CHARGE

Jeffrey G. Carlen

## LAST PRECEDING MAP EDITION

## TYPE OF SURVEY

- ☒ ORIGINAL  
☐ RESURVEY  
☐ REVISED

JOB PH- 7001

MAP CLASS Final

SURVEY DATES:

19 69 to 19 70

## I. INSTRUCTIONS DATED

## 1. OFFICE

Aerotriangulation

9/23/74

Compilation

1/23/75

## 2. FIELD

June 5, 1974

## II. DATUMS

## 1. HORIZONTAL:

☒ 1927 NORTH AMERICAN

## OTHER (Specify)

National Geodetic Vertical Datum 1929

## 2. VERTICAL:

- ☐ MEAN HIGH-WATER  
☐ MEAN LOW-WATER  
☐ MEAN LOWER LOW-WATER  
☐ MEAN SEA LEVEL

## OTHER (Specify)

## 3. MAP PROJECTION

Mercator central Parallel:  $46^{\circ}25'30''$ 

38'00"

## 4. GRID(S)

## STATE

Washington

## ZONE

South

## 5. SCALE

1:10,000 at central parallel

## III. HISTORY OF OFFICE OPERATIONS

OPERATIONS		NAME	DATE
1. AEROTRIANGULATION METHOD: Wild STK-1	BY	M. McGinley	1/31/75
	LANDMARKS AND AIDS BY	M. McGinley	1/31/75
2. CONTROL AND BRIDGE POINTS METHOD: Calcomp	PLOTTED BY	R. Robertson	1/24/75
	CHECKED BY	R. Robertson	1/24/75
3. STEREOSCOPIC INSTRUMENT COMPILATION INSTRUMENT: Wild B-8 SCALE: 1:5,000	PLANIMETRY BY	L. O. Neterer, Jr.	Sept 1976
	CHECKED BY	J. Byrd	Sept 1976
	CONTOURS BY	L. O. Neterer, Jr.	Sept 1976
	CHECKED BY	J. Byrd	Sept 1976
4. MANUSCRIPT DELINEATION  METHOD: Smoothdrafted  SCALE: 1:10,000 at central parallel	PLANIMETRY BY	D. Butler	Oct 1976
	CHECKED BY	J. Byrd	Dec 1976
	CONTOURS BY	D. Butler	Oct 1976
	CHECKED BY	J. Byrd	12/6/76
	HYDRO SUPPORT DATA BY	NA	
5. OFFICE INSPECTION PRIOR TO FIELD EDIT	CHECKED BY	NA	
	BY	J. Byrd	12/6/76
6. APPLICATION OF FIELD EDIT DATA	BY	D. Butler	Nov 1977
	CHECKED BY	F. Margiotta	Jan 1978
7. COMPILATION SECTION REVIEW	BY	F. Margiotta	Jan 1978
8. FINAL REVIEW	BY	A. L. Shands	Apr 1979
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH	BY	A. L. Shands	Jul 1979
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH	BY	E. L. Rolle	July 1979
11. MAP REGISTERED - COASTAL SURVEY SECTION	BY	E. L. DAUGHERTY	DEC 1979



NOAA FORM 76-36B  
(3-72)U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEYTP-0035 (2)  
COMPILATION SOURCES

## 1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-8 "E" and "W"		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) <u>COLOR</u> (P) <u>PANCHROMATIC</u> (I) INFRARED		ZONE	<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> DAYLIGHT
<input type="checkbox"/> PREDICTED TIDES N.A. <input type="checkbox"/> REFERENCE STATION RECORDS N.A. <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY N.A.				Pacific	
				MERIDIAN	120th
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
74E(C) 5762 - 5763	6/13/74	07:20	1:10,000	NOTE: Tides are not applicable to this project.	
*W 76-6 (P) 59462	4/21/75		1:12,000		
*W 75 3(P) 14-16	2/15/75	11:31	1:12,000		

## REMARKS

\* Used only for graphic delineation of field edit items. *Corps of Engineers Photography*

## 2. SOURCE OF MEAN HIGH-WATER LINE:

The source of the pool shoreline (elevation 738 ft.) is the above listed 1:10,000 scale compilation photography.

## 3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

Not applicable to this project.

## 4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED
					TP-00034 PH-7001

## 5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
No Survey	TP-00827	No Survey	TP-00034 In Job PH-7001

## REMARKS

Only the eastern third (1/3) of this map was compiled. See TP-00035 (PH-7101) for areas of map not compiled.

NOAA FORM 76-36C  
(3-72)U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

TP-00035(2)

## HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. B. Melby	Sept-Dec '74
2. HORIZONTAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	None None None
3. VERTICAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	R. B. Melby R. B. Melby R. B. Melby
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY LOCATED (Field Methods) BY IDENTIFIED BY	None None None
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input checked="" type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input type="checkbox"/> NO INVESTIGATION BY	R. B. Melby Sept-Dec '74
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	None
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	NA

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

None

2. VERTICAL CONTROL IDENTIFIED

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
		74E(C)5761	V-27-04
		74E(C)5762	V-27-03
		74E(C)5762	V-27-02
		74E(C)5763	V-27-01

3. PHOTO NUMBERS (Clarification of details)

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: ☒ REPORT ☐ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

None



NOAA FORM 76-36C  
(3-72)U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEYTP-00035(2)  
HISTORY OF FIELD OPERATIONSI. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	Sept 1977
2. HORIZONTAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	None None None
3. VERTICAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	None None None
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY LOCATED (Field Methods) BY IDENTIFIED BY	None None None
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> NO INVESTIGATION BY	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	R. Melby
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	None

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED		2. VERTICAL CONTROL IDENTIFIED	
None		None	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

3. PHOTO NUMBERS (Clarification of details)

W75-6(P)-59 and 62

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE

6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

## 8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

1 field edit ozalid

1 field edit report

NOAA FORM 76-36D  
(3-72)U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONTP-00035(2)  
RECORD OF SURVEY USE

## I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Compilation complete pending field edit	Oct 1976	Class III Manuscript	4/4/77	Field Edit 8/4/77
Field edit applied. Compilation complete.	Nov 1977	Class I Manuscript	2/2/78	
Final Review	Apr 1979	Final	Jul 1979	

## II. LANDMARKS AND AIDS TO NAVIGATION None

## 1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: \_\_\_\_\_3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: \_\_\_\_\_

## III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.  
 2. ☐ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM NOS 567 SUBMITTED BY FIELD PARTIES.  
 3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.  
 ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: \_\_\_\_\_

## IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

SECOND EDITION	SURVEY NUMBER TP-00035 (2)	JOB NUMBER CM-7408	TYPE OF SURVEY <input type="checkbox"/> REVISED <input checked="" type="checkbox"/> RESURVEY  MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input checked="" type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY 6/13/74 2/15/75 4/21/75	DATE OF FIELD EDIT 9/77	
THIRD EDITION	SURVEY NUMBER TP - (3)	JOB NUMBER PH -	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY  MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
FOURTH EDITION	SURVEY NUMBER TP - (4)	JOB NUMBER PH -	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY  MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	

NOAA FORM 76-36D





SUMMARY TO ACCOMPANY MAPS TP-00035(2)  
AND  
TP-00827 THROUGH TP-00835

This summary covers all of Project CM-7408 which consist of ten chart topography maps. They cover the area of the Lower Granite Dam Reservoir from the Lower Granite Dam southeastward to the town of Lewiston, Idaho, and from there south to just below Asotin, Washington. The area of the reservoir is bounded by a steep walled basaltic canyon, except at the southern end.

Maps in this project are to serve as the basis for construction of a small craft chart of the area. The maps are all ruled on the Mercator projection system. Maps TP-00827 through TP-00835 have lat.  $46^{\circ}25'30''$  as the central parallel and Map TP-00035(2) has lat.  $46^{\circ}38'00''$  as its central parallel. As can be expected, there is a significant difference in the scales of Maps TP-00035(2) and TP-00827, which joins it. See diagram, page 5 of this Descriptive Report.

Map TP-00035 (2) was added to this project just prior to the bridging function. All bridging was done at the Washington Science Center using the STK-1.

The photographs used for compilation were flown on three separate occasions. The first was taken with color film by the National Ocean Survey in June, 1974. This was followed with two sets taken by the Corp of Engineers using black and white film in February, 1975 and April, 1975. The April photographs were flown after the reservoir was flooded.

A bridge was run only on the color photography. Control for setting models of the black and white photography was obtained by identifying points common to that photography from the B-8 models of the color photographs.

All maps were compiled at the Atlantic Marine Center using the B-8 stereoplotter and graphic methods. The B-8 stereoplotter was used to obtain all elevations and contours, as well as the bulk of the planimetric features. Some map features, recommended for charting by the field editor, were identified on the 1975 U.S. Corps of Engineers photography. These features were applied to the map bases using graphic methods. In areas where control was sparse, the field edited map features were labeled (PA) for position approximate. Field edit was done in the Fall of 1977. All field edit items were applied to the maps at the Atlantic Marine Center.

All maps were final reviewed at the Atlantic Marine Center during the Spring of 1979. The original base maps and all applicable data was forwarded to the Washington Science Center for reproduction and final registration.



FIELD INSPECTION REPORT

Project CM-7408

Map Manuscripts T-00827 through TP-00835

September - December 1974

## FIELD INSPECTION REPORT

Project CM-7408

Map Manuscripts T-00827 through TP-00835

September - December 1974

General

The area contained in this report commences at the vicinity of the Lower Granite Dam, on the Snake River and upstream along the Snake River to the vicinity of the town of Asotin, and upstream along the Clearwater River, from its confluence with the Snake River to a point about 5 miles upstream.

Except in the area of the cities of Lewiston and Clarkston, the rivers flow through steep walled, basaltic canyons.

The Camas Prairie Railroad serves the area along the Snake River from the Lower Granite Dam to the city of Lewiston, Idaho, then along the south shore of the Clearwater River. There is little industry along the rivers, except in the Lewiston-Clarkston area.

Horizontal Control

1. Four supplemental control stations were established by the field party.
2. All horizontal control stations required by the Project Instructions for aero-triangulation were recovered and paneled for aerial photography. Control Station Identification Form 152 were submitted to the Rockville, Maryland, office on June 19, 1974.

Vertical Control

All bench marks necessary to establish the required photo-elevation points were recovered and NOAA Form 76-89 will be submitted for each mark searched for.

Critical Features

The pool area was inspected for critical features and possible obstructions to navigation. At the time the field party was determining the photo elevations, Corps of Engineers contractors were removing possible rocks, knobs, etc., and "dressing" slopes. Dredging and quarrying were in progress in the bottom of the Clearwater River on the downstream side of the Lewiston-North Lewiston Highway Bridge (see photo 74E 5921). Shoreline changes were in progress from Clarkston to Asotin on the Snake River, also between Clarkston and the mouth of Alpowa Creek. The Corps of Engineers, Walla Walla



District should be consulted as to the extent and profiling of the changes. Two contractors bridges, one upstream of the Lower Granite Dam and one downstream of the railroad bridge over the Clearwater River, were being removed. A highway bridge over the Snake River is under construction (see photo 74E 5877).

### Leveling

The elevations of the preselected photo-elevation points were determined by trigonometric leveling, utilizing the Wild T-1 and T-2 theodolites. Where the terrain or distances involved were not conducive to trig-leveling with the theodolite and stadio rod, the distances were measured with a RANGER III, Laser, distance measuring instrument. Two distances to each vertical point were observed, and non-reciprocal vertical angles were measured with a Wild T-2 theodolite, 2 D/R with a 10-second rejection limit. The distances were recorded in the field record book in meters to 3 decimal places. Pressure altitude, temperature, instrument and mirror constants were dialed into the RANGER III's system. This, in effect, is a closed loop observation, but the foresights and backsights were unbalanced. Therefore, Form 29D, Computations of Elevations for Non-Reciprocal Observations, was used; the difference in elevations of the long lines and the RANGER III distances were treated as two foresights.

The use of the RANGER III allowed the packing unit to carry only a retrodirective prism, a radio, telescoping tripod, photos, etc., as most of the photo-elevation points were on the near vertical slopes of the canyon walls, requiring back-packing up the steep slopes and bluffs to reach the preselected points. Otherwise, it would have required backpacking a tellurometer unit. The backpacking was a rigorous experience, but only the time factor in climbing slowed the field progress. The weather was favorable, the majority of the time cool and clear.

### Bottom Characteristics

Bottom characteristics were indicated on the field photographs. Most of the river bottom is either rocky or boulder/stone/gravel sediments.

### Photography

The photographs furnished the field unit were of good quality as to resolution and contrast.

### Geographic Names

Geographic names will be the subject of a separate report.

### Field Edit

Field edit will be the subject of a separate report at a later date, after the field edit has been accomplished.

Aids to Navigation

At the time the photo party was determining the photo-vertical points, employees of the Coast Guard were observed erecting the pedestals and towers for fixed aids to navigation. None of the images of the aids appear on the existing field photography.

RECOMMENDATIONS

It is recommended during the 1975 field season that the pool area be rephotographed to correct the shoreline changes and to permit the location of the aids to navigation by photogrammetric methods if so desired.

Respectfully submitted,

*Robert B. Melby* 1/9/75

Robert B. Melby, CPM103

cc: CPM1



## PHOTOGRAMMETRIC PLOT REPORT

Job CM-7408  
Snake River  
Lower Granite Pool  
Washington-Idaho  
January 1975

21. Area Covered

This project covers the Snake River from Lower Granite Dam to just south of Asotin, Idaho, and a portion of the Clearwater River to just east of Lewiston, Idaho. Included are ten T-sheets (TP-00827 thru TP-00835 and TP-00035). T-sheet TP-00035 was generated at the request of the Rockville Review Section.

Sheets TP-00827 thru TP-00835 were plotted with 1:10,000-scale Mercator projections - central parallel  $46^{\circ}25'30''N$ . Sheet TP-00035 was plotted with 1:10,000-scale Mercator projections - central parallel  $46^{\circ}38'00''N$ . All sheets have the Washington State Grid (south zone) intersections plotted at 5,000-foot intervals. Sheets TP-00832 thru TP-00835 also have the Idaho State Grid (west zone) intersections plotted at 5,000-foot intervals.

22. Method

A total of twenty-one strips of color photography were bridged on the Wild STK-1 in order to obtain pass-point positions and elevations to be used during compilation. Three strips of 1:30,000-scale photography (strips 1, 2, and 3) were bridged in order to obtain horizontal tie point positions for use in adjusting the other eighteen strips of 1:10,000-scale photography (strips 4 thru 21).

Strip 1 was adjusted on five field-identified triangulation stations and sixteen vertical points with six horizontal tie points and eight vertical points as checks. Strip 2 was adjusted on four field-identified triangulation stations and ten vertical points with one additional triangulation station and eight horizontal tie points as checks. Strip 3 was adjusted on three field-identified triangulation stations and seven vertical points with seven horizontal tie points as checks. Strip 4 was adjusted on four horizontal tie points and eight field-identified vertical points with four horizontal and one vertical tie point as checks. Strip 5 was adjusted on three horizontal tie points and eight field-identified vertical points with seven horizontal and four vertical tie points as checks. Strip 6 was adjusted on four horizontal tie points and twelve field-identified vertical points with eleven horizontal and six vertical points as checks. Strip 7 was adjusted on four horizontal tie points and nine field-identified vertical points with twelve horizontal and six vertical tie points as checks. Strip 8 was adjusted on five horizontal

tie points and eight field-identified vertical points with ten horizontal and five vertical tie points as checks. Strip 9 was adjusted on four horizontal tie points and ten field-identified vertical points with eleven horizontal and five vertical tie points as checks. Strip 10 was adjusted on three horizontal tie points and seven field-identified vertical points with nine horizontal and four vertical tie points as checks. Strip 11 was adjusted on five horizontal tie points and six field-identified vertical points with seven horizontal and three vertical tie points as checks. Strip 12 was adjusted on three horizontal tie points; six field-identified vertical points; and one vertical tie point with one additional field-identified vertical point; nine horizontal and five vertical tie points as checks. Strip 13 was adjusted on one field-identified triangulation station; five horizontal tie points; and nine field-identified vertical points with three additional field-identified vertical points; nine horizontal and three vertical tie points as checks. Strip 14 was adjusted on one field-identified triangulation station; three horizontal tie points; seven field-identified vertical points; and one vertical tie point with twelve horizontal and six vertical tie points as checks. Strip 15 was adjusted on seven horizontal tie points; seven field-identified vertical points; and one vertical tie point with eight horizontal and seven vertical tie points as checks. Strip 16 was adjusted on three horizontal tie points and eight field-identified vertical points with one additional field-identified triangulation station; twelve horizontal and eight vertical tie points as checks. Strip 17 was adjusted on three horizontal tie points; seven field-identified vertical points; and one vertical tie point with eight horizontal tie points; one additional field-identified vertical point; and four vertical tie points as checks. Strip 18 was adjusted on three horizontal tie points and seven field-identified vertical points with five horizontal and two vertical tie points as checks. Strip 19 was adjusted on five horizontal tie points and ten field-identified vertical points with eight horizontal tie points; one additional field-identified vertical point; and three vertical tie points as checks. Strip 20 was adjusted on three horizontal tie points and six field-identified vertical points with seven horizontal tie points; two additional field-identified vertical points; and four vertical tie points as checks. Strip 21 was adjusted on three horizontal tie points and eight field-identified vertical points with five horizontal and two vertical tie points as checks.

All adjustments were performed on the IBM 6600. All sheets were ruled and plotted on the Calcomp.

### 23. Adequacy of Control

All horizontal and vertical control utilized in the adjustments held within National Map Accuracy.




24. Supplemental Data

Vertical control for bridging the three 1:30,000-scale strips only was obtained from local USGS quadrangles.

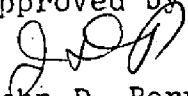
25. Photography

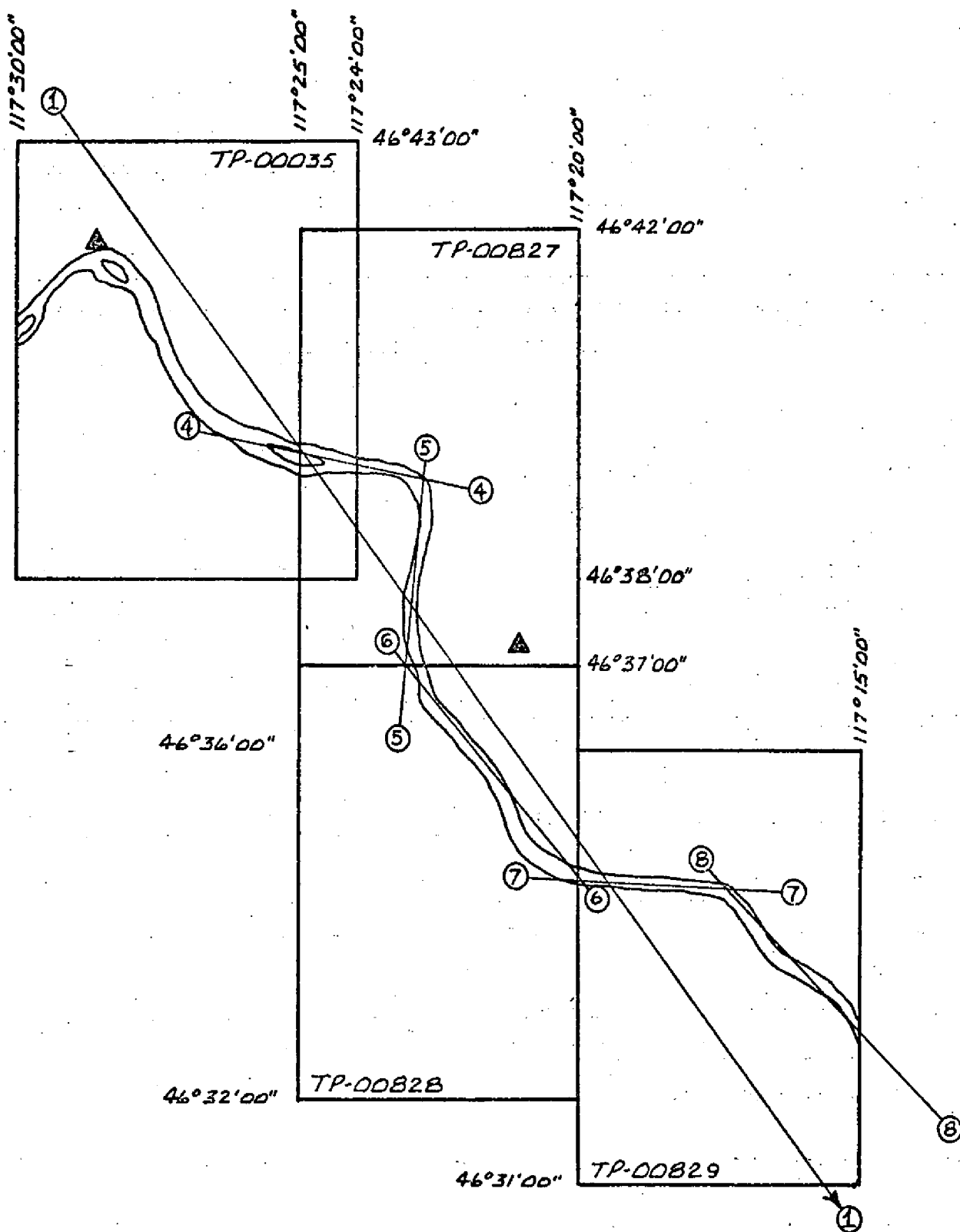
Photography was adequate as to overlap, definition, and coverage.

Submitted by:

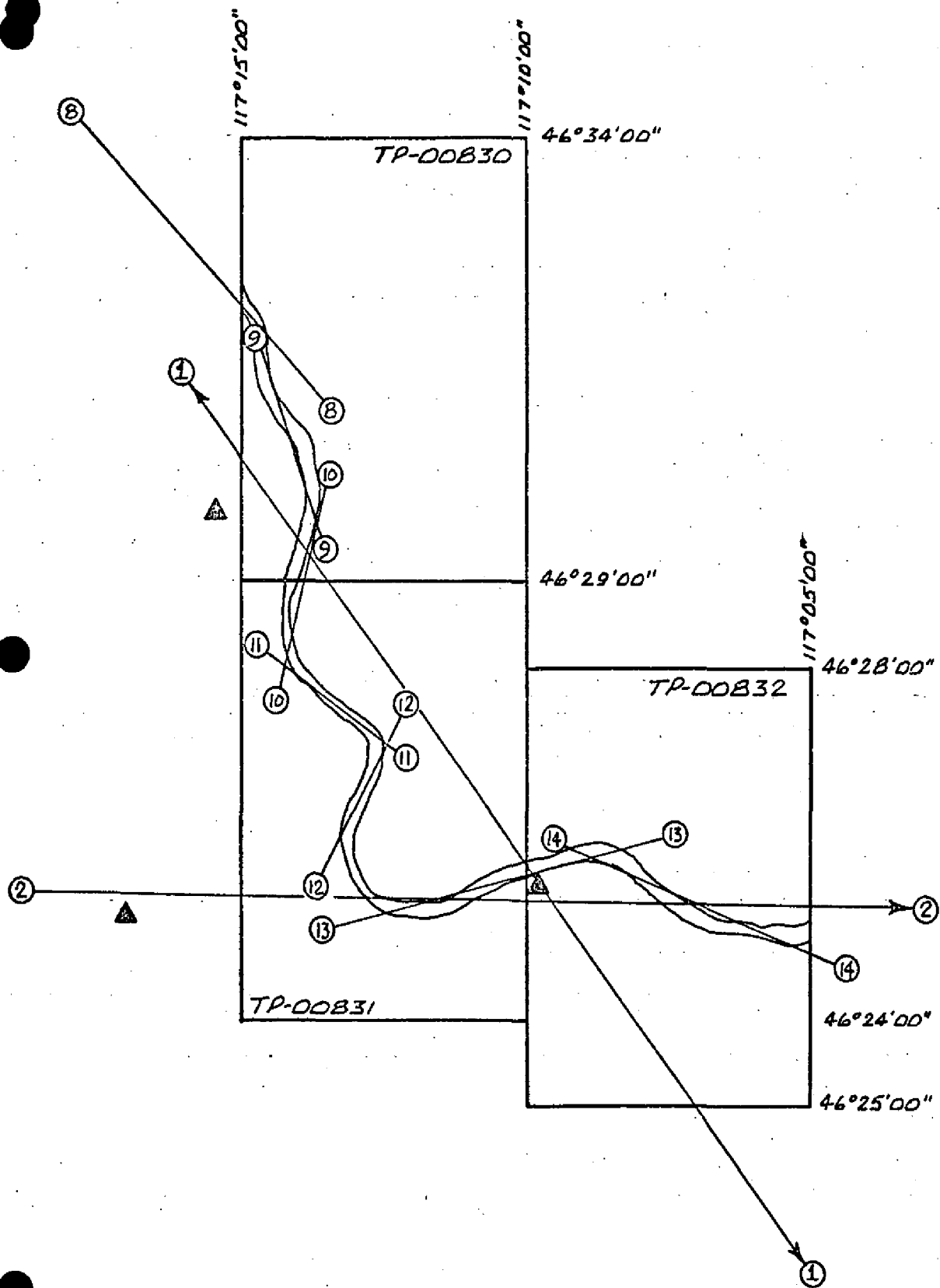
  
Michael L. McGinley

Approved by:

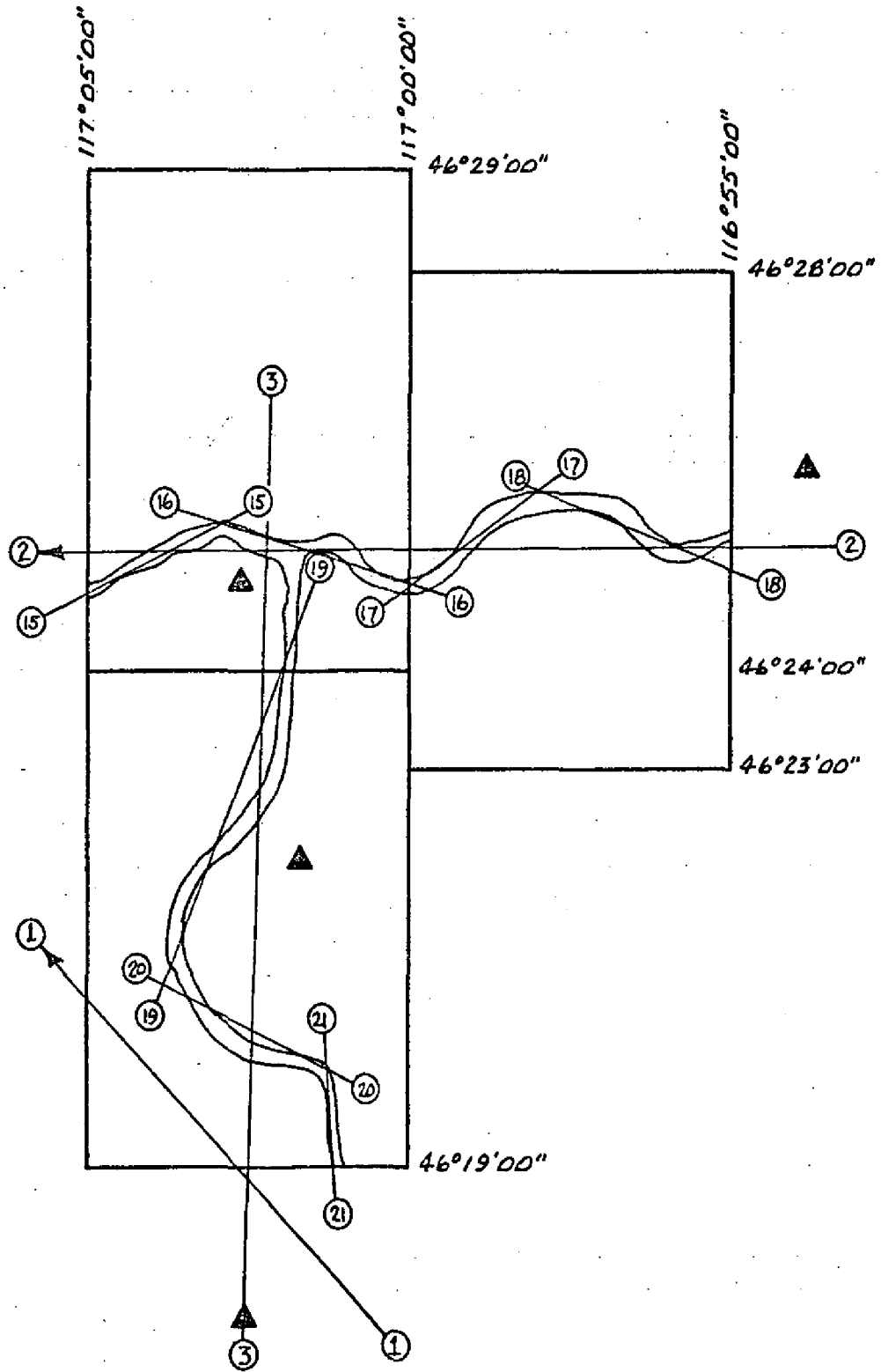
  
John D. Perrow, Jr.  
Chief, Aerotriangulation Section



JOB CM-7408  
SNAKE RIVER  
WASHINGTON - IDAHO







## DESCRIPTIVE REPORT CONTROL RECORD

MAP NO. TP-00035(2)	JOB NO. CM-7408	GEODETTIC DATUM NA 1927		ORIGINATING ACTIVITY Costal Mapping Division, AMC Norfolk, VA		
		SOURCE OF INFORMATION (Index)	AEROTRI- ANGULATION POINT NUMBER	COORDINATES IN FEET STATE Washington ZONE South	GEOGRAPHIC POSITION $\phi$ LATITUDE $\lambda$ LONGITUDE	
ALMOTA, 1945	GP VOL 1 pg. 1116 zone 2 p225 BK 905 p6&25			X= 2,760,290.49 Y= 514,006.72	$\phi$ $\lambda$	REMARKS
				X=	$\phi$	
				Y=	$\lambda$	
				X=	$\phi$	
				Y=	$\lambda$	
				X=	$\phi$	
				Y=	$\lambda$	
				X=	$\phi$	
				Y=	$\lambda$	
				X=	$\phi$	
				Y=	$\lambda$	
				X=	$\phi$	
				Y=	$\lambda$	
				X=	$\phi$	
				Y=	$\lambda$	
				X=	$\phi$	
				Y=	$\lambda$	
				X=	$\phi$	
				Y=	$\lambda$	
				X=	$\phi$	
				Y=	$\lambda$	
COMPUTED BY J. Roderick				COMPUTATION CHECKED BY F. P. Margiotta		DATE 10/18/76
LISTED BY				LISTING CHECKED BY		DATE
HAND PLOTTING BY				HAND PLOTTING CHECKED BY		DATE

SUPERSEDES NOAA FORM 76-41, 2-71 EDITION WHICH IS OBSOLETE.

## COMPILATION REPORT

TP-00035(2)

31. DELINEATION:

Delineation was done from two sets of photographs. The first set was flown in June, 1974 with color film. It was bridged by the Rockville Office. The second set was flown by the Corps of Engineers in February, 1975 using black and white film. No bridge was run on it.

Control for the second set of photographs was established in the B-8 models of the first set. Details which had been altered by construction since the first photography were revised.

32. CONTROL

See the Photogrammetric Plot Report dated Jan. 31, 1975, and the Field Inspection Report dated Sept. - Dec., 1974, for horizontal and vertical control.

33. SUPPLEMENTAL DATA

None.

34. CONTOURS AND DRAINAGE

Contours at 3, 6, and 10ft. intervals decreasing from the 738 ft. pool line, and drainage <sup>were</sup> delineated <sup>using</sup> of the <sup>1974</sup> photographs. See Compilation Instructions dated Jan. 23, 1975, item 9. 04. 1 Contours (Depth Curves)

35. SHORELINE AND ALONGSHORE DETAILS

The pool line at 738 ft. (NGVD) and details alongshore were delineated by office interpretation of the photographs.

36. OFFSHORE DETAILS

Critical features, such as rocks, boulders, knobs, and hilltops, thought to be possible dangers to navigation were compiled by office interpretation and referred to the field editor for verification.

TP-0003537. LANDMARKS AND AIDS

None.

38. CONTROL FOR FUTURE SURVEYS

None.

39. JUNCTIONS

See the Form 76-36b, item #5 concerning junctions.

40. HORIZONTAL AND VERTICAL ACCURACY

Refer to the Photogrammetric Plot Report, dated Jan., 1975 for horizontal accuracy. Vertical control established by field methods and the subsequent bridging ~~vertical control~~ were adequate for the model leveling process.  
A.L.S.

46. COMPARISON WITH EXISTING MAPS

A comparison was made with U.S. Geological Survey Quadrangle Map Almota, Washington, scale 1:24,000, dated 1964.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with chart No. 18547, scale 1:20,000, 3rd edition, dated May 8, 1976.

The Lower Granite Lock and Dam is now compiled as structurally complete, but the area impounded immediately above the dam has been flooded to the 738 ft. level and is substantially changed from that of the chart.



TP-00035

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by:

*David P. Butler*

David P. Butler

Cartographic Technician

Date: Oct. 20, 1976

Approved:

*Albert C. Rauck, Jr.*

Albert C. Rauck, Jr.

Chief, Coastal Mapping Section

April 30, 1979

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7408 (Snake River, Lower Granite Dam, Washington, Idaho)

TP-00035 (2)

Camas Prairie (RR)

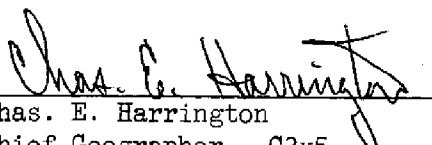
Lower Granite Dam

Lower Granite Lake

Offield Landing

Snake River

Approved by:

  
Chas. E. Harrington  
Chief Geographer - C3x5

NOAA FORM 75-74  
(7-75)U.S. DEPARTMENT OF COMMERCE  
NOAA  
NATIONAL OCEAN SURVEYPHOTOGRAMMETRIC OFFICE REVIEW  
TP - 00035(2)

1. PROJECTION AND GRIDS JLB	2. TITLE FM	3. MANUSCRIPT NUMBERS FM	4. MANUSCRIPT SIZE FM
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY JLB	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) NA		7. PHOTO HYDRO STATIONS NA
8. BENCH MARKS NA	9. PLOTTING OF SEXTANT FIXES NA	10. PHOTOGRAMMETRIC PLOT REPORT JLB	11. DETAIL POINTS JLB
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE JLB	13. LOW-WATER LINE NA	14. ROCKS, SHOALS, ETC. JLB	15. BRIDGES JLB
16. AIDS TO NAVIGATION JLB	17. LANDMARKS JLB	18. OTHER ALONGSHORE PHYSICAL FEATURES JLB	19. OTHER ALONGSHORE CULTURAL FEATURES JLB
PHYSICAL FEATURES			
20. WATER FEATURES JLB	21. NATURAL GROUND COVER NA		22. PLANETABLE CONTOURS NA
23. STEREOSCOPIC INSTRUMENT CONTOURS JLB	24. CONTOURS IN GENERAL JLB	25. SPOT ELEVATIONS JLB	26. OTHER PHYSICAL FEATURES JLB
CULTURAL FEATURES			
27. ROADS JLB	28. BUILDINGS JLB	29. RAILROADS JLB	30. OTHER CULTURAL FEATURES JLB
BOUNDARIES			
31. BOUNDARY LINES JLB Limits of Photography Revision Limits		32. PUBLIC LAND LINES NA	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES jlb	34. JUNCTIONS See Addn. to Comp. Report and Plot Report		35. LEGIBILITY OF THE MANUSCRIPT JLB
36. DISCREPANCY OVERLAY JLB	37. DESCRIPTIVE REPORT JLB	38. FIELD INSPECTION PHOTOGRAPHS JB	39. FORMS JLB
40. REVIEWER Jim Byrd 12/6/76		SUPERVISOR, REVIEW SECTION OR UNIT Albert C. Rauck, Jr.	
41. REMARKS (See attached sheet)			
FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT			
42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.			
COMPILER D. Butler F. Margiotta	11/11/77	SUPERVISOR Albert C. Rauck, Jr.	
Reviewer F. Margiotta	11/11/78	Albert C. Rauck, Jr.	
43. REMARKS <del>See Form 76-36C, items #3 and #8.</del>			

## FIELD EDIT REPORT

Project CM-7408

Lower Granite Reservoir, Snake River  
Idaho, Washington

September 1977

2. Areal Field Inspection:

The project area is a section of the Snake River that is impounded by the Lower Granite Dam, forming a navigable pool and the lands adjacent to the pool.

The river passes through a steep canyon with numerous basaltic bluffs. The tops of the bluffs give way to open, rolling prairies which in a large part are cultivated grain fields.

Except for the area near the mouth of the Clearwater River where the cities of Lewiston, Idaho and Clarkston, Washington are located the area is sparsely populated.

The area is traversed by a line of the Camas Prairie Railroad, along the north and east shore of the Snake River and the Clearwater River. Two highway bridges and one railroad bridge are found in the area. One highway bridge in the vicinity of Clarkston, Washington is under construction.

3. Horizontal Control:

Horizontal control requirements consisted on paneling of preselected triangulation stations, necessary for aerial photography. The panels were the conventional, white opaque polyethylene material, cut to conform to the specifications for the premarking of control stations. All of the stations paneled were bureau triangulation stations. The establishment of new horizontal control stations was not required for photo-horizontal control.

Form 152, Control Station Identification cards were submitted for each station paneled. All of the paneled stations were in open areas and no difficulty should be encountered due to trees or shadows.

4. Vertical Control:

Vertical control consisted of the determination by the usual field methods of the elevations of preselected, photogrammetric vertical control points. These points are indicated on the field photographs with



the prefix "V" and a numbering system utilizing the last two digits of the numbered "TP" sheet (quadrangle) and consecutive numbers. A sketch of the feature appears on the reverse side of the photograph.

All leveling was based on bench marks established by the Coast and Geodetic Survey and the Corps of Engineers.

5. Contours and Drainage:

Contours only applicable for the office compilation of depth curves for underwater topography, based on the field determination of pre-selected photogrammetric vertical control points are required for the project.

7. Alongshore Features:

Alongshore features in the form of small boat launching ramps, floats, piers, bridges, pumping stations and power transmission lines have been indicated on the field photography.

8. Offshore Features:

Several features in the form of rocks were found along the shoreline. They have been indicated on the field photography. Several concrete bridge piers are found in the channel of the Snake River, near the mouth of the Clearwater River. The piers have been in place for four years and no progress on the bridge construction is evident, although local sources indicate the bridge construction may begin in the near future.

9. Landmarks and Aids to Navigation:

All aids to navigation were located by the field party. The majority of the fixed aids to navigation were photo-identified on the prints furnished by the U.S. Corps of Engineers. Several of the fixed aids to navigation were determined by ground survey methods.

Several landmarks for charts were located by the field party either by photo-identification or ground survey methods.

There are numerous skeleton steel, power transmission towers in the area and they are of landmark value. But, except for instances where they are the ends of overhead cable crossings, it is difficult to isolate and identify a particular tower from offshore.

The area is unusual as few salient landmark objects are visible from offshore.

All landmarks and fixed aids to navigation have been listed on Form 76-40.

13. Geographic Names:

Geographic names are the subject of a separate report. The report is dated January 1975.

14. Special Reports:

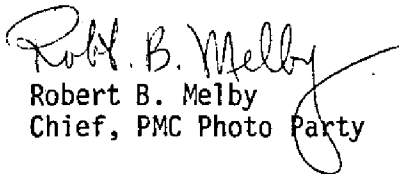
The method of leveling used by the field party was the conventional trigonometric leveling with the Wild T1A theodolite and stadia rod. Due to the steepness of the canyon walls it was necessary to observe vertical angles across the river to avoid exceeding the 10° limit as imposed by the project instructions. Due to the distance involved, the RANGER III laser system was used with good results. A double determination or a closed loop leveling method was employed to obtain a check elevation.

The entire shoreline was field edited (inspected) from a small boat.

15. Small Craft Facilities Investigation:

The small craft investigation was conducted during the month of September 1977. All the facilities were visited and the pertinent information has been entered on Form 77-3.

Respectfully submitted,

  
Robert B. Melby  
Chief, PMC Photo Party

REVIEW REPORT  
TP-00035(2)  
CHART COMPILATION

April 23, 1979

61. GENERAL STATEMENT:

See Summary, page 6 of this Descriptive Report.

Configuration of the concrete ramp and float at Offield Landing was revised during final review. The ramp and float were recommended for charting by the field editor.

There is a significant scale difference between this map and TP-00827 to the east, caused by the fact that this map was ruled on a Mercator Projection having Lat.  $46^{\circ}38'00''$  as its central parallel. Map TP-00827 was ruled on a Mercator Projection having Lat.  $46^{\circ}25'30''$  as its central parallel. Precautions were taken during compilation to assure a satisfactory tie.

Compilation of this map includes only the Lower Granite Dam and its immediate vicinity. This map is a revision of Map TP-00035 of project PH-7001.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC MAPS:

Not applicable.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

Not applicable.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Hydrography for this area consist of contours and spot elevations delineated from aerial photography taken prior to fielding of the dam. They are displayed on this Chart Topography Map.

65. COMPARISON WITH NAUTICAL CHARTS:

This project is to serve as the basis for construction of a new chart covering the project area. At this writing that chart is not in publication. This area has not been previously charted.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This map was compiled in compliance with the project instructions. The method employed for the application of field edit (See Summary, page 6) was neither prohibited nor recommended by the instructions.

Submitted by:

*A. L. Shands*

A. L. Shands  
Final Reviewer

Approved for forwarding:

*Bill H. Barnes*

Chief, Photogrammetric Branch, AMC

Approved:

*John D. Perrau Jr.*

Chief, Photogrammetric Branch

*John L. Latta*

Chief, Photogrammetry Division



